

Instructional Timeline – Kindergarten Mathematics – 1st Nine Weeks	
Unit 1A: First Introduction to Math in the Real World	
Suggested Time Frame: ≈ 3 weeks and ongoing throughout the year	
Introduction	The Instructional Timeline, as required by RRISD Local Board Policy (EG – Local, 246909), breaks down the content of each nine-week period into smaller, more manageable units of instruction.
Description	<p>Students will relate everyday language to mathematical language and symbols. They will begin to read a calendar using days, weeks, and months. They will begin counting to 100. Students will display math concepts using graphs of real objects, concrete models, and pictures in problem solving connected to everyday experiences.</p> <p>Students will continue to count, use a calendar, and construct and use graphs of real objects or pictures throughout the school year (ongoing).</p>
TEKS/SEs taught during this period	<p>K.6 Patterns, relationships, and algebraic thinking. The student uses patterns to make predictions. K.6B Count by ones to 100.</p> <p>K.11 Measurement. The student uses time to describe, compare, and order events and situations. K.11C Read a calendar using days, weeks, and months.</p> <p>K.12 Probability and statistics. The student constructs and uses graphs of real objects or pictures to answer questions. K.12A Construct graphs using real objects or pictures in order to answer questions K.12B Use information from a graph of real objects or pictures in order to answer questions</p> <p>K.13 Underlying processes and mathematical tools. The student applies Kindergarten mathematics to solve problems connected to everyday experiences and activities in and outside of school. K.13A Identify mathematics in everyday situations. K.13B Solve problems with guidance that incorporates the processes of understanding the problem, making a plan, carrying out the plan, and evaluating the solution for reasonableness. K. 13C Select or develop an appropriate problem-solving strategy including drawing a picture, looking for a pattern, systematic guessing and checking or acting it out in order to solve a problem. K.13D Use tools such as real objects, manipulatives, and technology to solve problems.</p> <p>K.14 Underlying processes and mathematical tools. The student communicates about Kindergarten mathematics using informal language. K.14A Communicate mathematical ideas using objects, words, pictures, numbers and technology. K.14B Relate everyday language to mathematical language and symbols.</p> <p>K.15 Underlying processes and mathematical tools. The student uses logical reasoning. K.15A Justify his or her thinking using objects, words, pictures, numbers, and technology.</p>
Generalizations	<ol style="list-style-type: none"> 1. Number concepts can be used every day. 2. Counting is a way to find a number of objects. 3. A calendar measures time in years, months, and days. 4. Math ideas can be expressed in words, and information can be organized and explained.

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Essential Questions	<ul style="list-style-type: none"> • Where do you find numbers? • How are numbers helpful? • Why do we count things? • How high can you count? • Do you see a number pattern? (calendar) • What do you use a calendar for? • How many days until _____? • How can you show your math idea? • Why do we make graphs? • How do you use the information?
Core Components	<p>Including Statements:</p> <ul style="list-style-type: none"> ▪ Matches oral count to objects ▪ Begins to identify patterns in numbers ▪ Begins to identify and order days of the week ▪ Begins to identify months of the year ▪ Counts orally on the calendar ▪ Uses patterns to read the calendar ▪ Applies problem solving strategies to real-life situation ▪ Solves problems from every strand ▪ Begins to use mathematical language appropriate to the situation ▪ Organizes information from lunch choices, daily attendance, ... <p>Note to Kindergarten teacher: In kindergarten the focus in graphing is <i>real object</i> and <i>picture graphs</i>; <i>bar-type graphs</i> are not introduced until 1st grade. With real object graphs and picture graphs, each cell represents exactly one of the real objects or whatever the pictures represent (1 piece of data). In 3rd grade, students are introduced to <i>pictograms</i> and <i>bar graphs</i>, where a cell may be used to represent more than one piece of data.</p> <p>Kindergarteners may provide an appropriate title for their graphs and label the data. It is not until 3rd grade, when students use pictographs where pictures may represent more than 1 piece of data, that a legend or key is necessary. No legend or key is used for a picture graph or a real object graph.</p>
Curricular Connections (within, between, and among disciplines)	<p><u>Related Science TEKS</u> K.2D record and organize data and observations using pictures, numbers, and words</p> <p><u>Related Social Studies TEKS</u> K.3A Understand concepts of chronology; calendars and schedules</p>
Required Lessons	
Recommended Lessons and Learning Experiences	<p>Investigations Unit 1: Investigation 1 Session 1.1 – 1.6 The Attendance and Calendar Routines Unit 2: Investigation Session 1.1 page 26, 43, 55, 71 Counting and Comparing</p> <p>Mathematics TEKS Toolkit Clarifying Lesson Using Numbers Everywhere Learning Centers List (Use centers that are appropriate for your students at this time of year or modify as appropriate.)</p>

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	<p>Mathematics TEKS Toolkit – Clarifying Activities Using a Calendar – Scroll down to K.11C Patterns, Relationships, and Algebraic Thinking</p> <p>Engaged Learning Options:</p> <ul style="list-style-type: none"> Calendar songs and games Calendar activities should include ONLY counting days of school, reading calendar using days/weeks/month, yesterday/today/tomorrow, weather graphing and problem solving activities – ex: questions about how many present or absent, lunch count, how many days until _____. (Teacher Note: any activities involving money, telling time, odd and even are not included in the Kindergarten TEKS. These are introduced in first grade and should not be included in kindergarten calendar. Calendar activities should take 10 to 15 minutes.) Counting chants Graphing the weather using pictures Graphing birthdays using pictures Lunch graph using pictures Graphing ways to go home using pictures Graphing real objects (shoes – see Clarifying Activity K.12.b) Introduce math stations and math tools to explore <p>NCTM Navigations-<i>Navigating Through Problem Solving and Reasoning Grades PreK-2</i> (Look in Campus Library or order through i-Bistro District Library Catalog)</p> <ul style="list-style-type: none"> “Bears in the House and in the Park” page 10 <p>NCTM Navigations-<i>Navigating Through Measurement Grades PreK-2</i> (Look in Campus Library or order through i-Bistro District Library Catalog)</p> <ul style="list-style-type: none"> “Calendar Logic” page 52 <p>Mathematics TEKS Refinement “All in a row”</p> <p>enVision MATH Topic 15 – Calendar</p> <ul style="list-style-type: none"> Interactive Math Story p. 271M Lesson 1 – p. 273A Lesson 2 – p. 275A Lesson 3 – p. 277A Lesson 4 – p. 279A Lesson 5 – p. 281A <p>*Focus especially on the Additional Activity for each lesson, along with the differentiated activities/centers.</p>
Differentiation	<p>English Language Proficiency Standards Student Expectations with Sentence Stems and Activities to support implementation of the Standards (Note: when you open the link, it may ask you for a certificate or if it is OK to open the file, click OK each time you see the screens.)</p>

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	<p>Use Math TEKS Connections “Models and Representations” chart to modify level of difficulty</p> <p>Less Depth and Complexity:</p> <ul style="list-style-type: none"> Math TEKS Connections strategies from “Rapid Assessments” page 971, 973 Note the kinds of mistakes when counting from 1-19 (what numbers were skipped, was there a pattern) Continue counting aloud even if skip twelve or some other number Extra time to complete tasks Small group or partner with peer model. Pre-teach vocabulary; vocabulary repeated often Signal (Example: thumbs up/down) to share ideas or answers and to check for understanding Select answer from given choices Use pictures and hands on materials to explain vocabulary <p>More Depth and Complexity:</p> <ul style="list-style-type: none"> Math TEKS Connections strategies from “Rapid Assessments” Math TEKS Connections strategies from “Rapid” Assessments page 971, 973 Did the student pause at each decade – remind of pattern – start counting at another number than one Create own problems beyond grade level expectations Students use multiple strategies and explanations Small group (extension)
Instructional Resources	<p>Resource and Picture Books</p> <ul style="list-style-type: none"> <i>Teaching Student-Centered Mathematics: Grade K-3</i> by Van de Walle & Lovin <i>Math Start</i> by Stuart Murphy <i>Every Buddy Counts</i> (Counting) <p>Discovery Education Streaming Learning to Use the Calendar Real People Real Math</p> <p>Round Rock ISD Elementary Mathematics Webpage</p>
Assessment Resources	<p>Rapid Assessments</p> <p>Acces4 Database – Consult campus Instructional Technology Specialist for assistance with accessing Acces4 database.</p>